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8
STACKS

THE FARM INDEX

U.S. Department of Agriculture/October 1972

\$10 Billion
in Farm Exports:
Reachable by 1980?

7
National Agricultural



All in all, the corn picture is shaping up better than this time a year ago. Domestic use will be up again in 1972/73, as will export sales. Prices are seen higher at harvest, and more stable thereafter.

ERS bases its price prognosis on the following:

- This year's smaller crop, estimated on September 1 at 5.1 billion bushels compared with 5.5 billion in 1971.
- A 1-2 percent increase in the number of grain-consuming animal units, combined with continued favorable livestock prices and feed price ratios.
- Strong foreign demand. Boosted by sales to Russia, U.S. corn exports in 1972/73 could be larger than the 750 million bushels estimated this year.
- Improved balance in the corn supply and projected needs, with some drop in carryover expected at the end of the 1972/73 season.

Two forces in particular will be working to stabilize prices in 1972/73. The large corn supply looks ample to meet expanding needs at a price that's still attractive to users. And a large quantity will be under loan and owned by the CCC.

Loan activity will be the "real key" to the seasonal price pattern, ERS reports. "Generally, movement of large volumes into loan tends to strengthen prices. On the other hand, it also tends to temper any sharp price rise."

The 1972/73 prospects for other feed grains—

Grain sorghum supply is forecast at 963 million bushels, off slightly from a year ago and 11 percent under the 1965-69 average. Domestic use may at least equal the 716 million bushels for the 1971/72 season. The export picture is still hazy due to uncertainties about Argentine availabilities and to the extent of Japanese use of sorghum. Smaller U.S. production, good feed demand, plus the raised loan rate point to higher farm prices than the \$1.86/cwt. received for the '71 crop.

Oat supply, placed at 1.3 billion bushels, is down 7 percent from 1971/72. This, with reasonably heavy de-

mand, will maintain fairly strong oat prices. But the seasonal rise may be limited by the large volume (372 million bushels) of oats under loan and owned by the CCC.

Barley supply is figured at about 600 million bushels, 5 percent lower than a year earlier. Domestic use may approximate last year's 408 million bushels, and prices are likely to average a few cents higher.

The outlook for the 1972/73 hay situation features lower production, greater consumption, and strong prices. At 154 million tons, the supply is about the same as a year ago. Bigger carryover offsets a reduced hay crop, estimated at 128 million tons on September 1. Assuming near average disappearance per animal, 1972/73 hay use would total around 133 million tons—4 percent more than last season.

How can farmer cooperatives serve in new areas and in new ways? That's the question more than 7,000 cooperatives are asking their members this October. It's Co-op Month, and the theme is "Cooperatives Serve."

As in the past, State and local groups will be observing Co-op Month with wide-ranging activities, from rallies and exhibitions to radio and TV programs and man-of-the-year awards. Major event is the presentation of



Cooperatives Serve!

three national awards for distinguished service in Cooperative Statesmanship, Cooperative Communications, and International Cooperative Development.

Net business done by farmer cooperatives rose from about \$8 billion in 1950 to over \$19 billion in 1969-70. California, Minnesota, and Iowa had the 1-2-3 rankings in terms of net value of marketing, farm supply, and related services.

It could be another recordbreaker for cash receipts from dairying. Milk

and cream marketings grossed farmers some \$4.2 million in January-July, or about 4½ percent more than in the 1971 period.

For the year as a whole, ERS estimates cash receipts will hit \$7.1 billion—up from last year's \$6.8 billion. Both higher prices and larger marketings are contributing to the gain.

Through August, milk prices received by farmers averaged \$5.90/cwt. Increases the rest of the year should lift the 1972 average to \$6-\$6.05, compared with 1971's \$5.87.

Another jump is also in store for milk production, which last year reached 118.6 billion pounds. The daily milk flow during January-July 1972 outran the same months of '71 by 1½ percent. A similar increase the rest of the year would push total milk output to around 120½ billion pounds, the most since 1965.

Milk supplies available for manufacturing should continue above a year ago, maybe rising about 3 percent for all of 1972. Output will be up for most dairy products. Possible exceptions include butter, canned milk, and nonfat dry milk. Biggest gainer will be American cheese, production of which advanced 12 percent in the first 7 months.

Consumer purchases of most dairy products have been brisk so far this year, with the largest sales increases recorded by hard cheeses and skim and lowfat milk. Whole milk sales in January-May lagged behind year-earlier levels, but this year's decline could be the smallest since 1966.

Cotton will be more plentiful in the 1972/73 marketing year. There will be enough to satisfy prospective domestic and export demand and still have some left to help replenish stocks, ERS said in its August *Cotton Situation*.

Total supply may be over 2 million running bales above last season's 14½ million. Disappearance will inch up only slightly, leaving next August's stocks at about 5.0 million running bales. Stocks were 3.3 million on August 1, 1972. (See story page 7.)

Frost and other adverse weather cut sharply into this year's crop of non-citrus fruits. Forecasts available in late

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Reachable By 1980?**
Possibly sooner, if certain
conditions prove favorable

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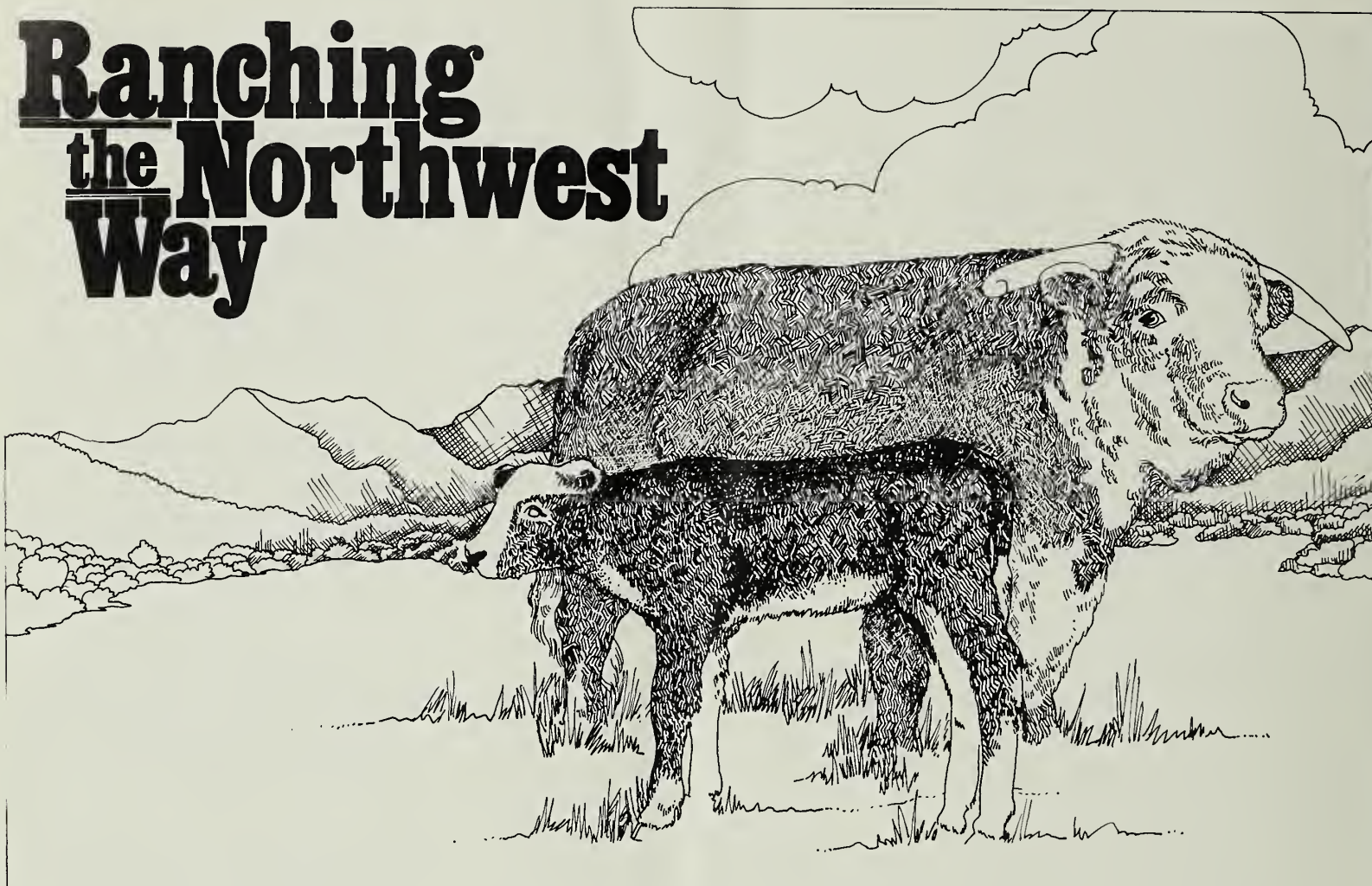
August added up to a 17 percent drop
in total production from the 1971
level and 11 percent from 1970.

Topping the list of the short sup-
ply crops are apricots, sweet cherries,
peaches (excluding California cling-
stones), grapes, and plums and prunes
(excluding California fresh plums). Pear
production, though down from last
season's big crop, is larger than 1970's.
Apple output is near last year's level.
Tart cherries are more abundant, while
forecasted production is near or some-
what higher than last year's for Cali-
fornia clingstone peaches, fresh plums,
and nectarines.

The tree nut outlook is mixed. Al-
mond producers expect another record
crop, but walnut production will be
lower. Exports have played an increas-
ingly important role in the marketing
of these crops, especially almonds.
Domestic demand has also been on
the upswing, and the markets for both
crops appear firm.

Foreign News Briefs. Heavy rains in
the Philippines during July and early
August caused calamitous floods de-
scribed by the government as the
worst ever. Loss to the rice crop is
estimated at 300,000 tons (milled
basis). Officials recently announced an
additional 300,000 tons of rice imports
will be needed in 1972, bringing total
imports for the year to 800,000 tons
. . . Mexico apparently feels it can im-
port wheat easier than oilseeds. The
government reduced the water alloca-
tion for wheat acreage to release land
and water for cotton and safflower
production. As a result, wheat output
in 1972 fell to 1.9 million tons from
2.2 million in 1970 . . . Japan has
agreed to import up to \$50 million of
U.S. grain in the April 1972-March
1973 period. This quantity is above
normal Japanese trade requirements
and includes a commitment for the
purchase of \$21 million of feed grains
(350,000 tons) and \$5 million of wheat
(75,000 tons) . . . U.S. agricultural ex-
ports to the European Community
rose to a record \$1.89 billion in 1971/
72, 7 percent more than a year earlier.
Most of the increase came in com-
modities not subject to the variable
levies imposed by the Community.

Ranching the Northwest Way



Dear Sir: I saw your ad offering to sell up to 5,000 acres of grazing land in southeastern Montana at \$35 an acre. Would you consider selling me 30 acres? I'm interested in starting up a cow-calf business.—Eastern Upstart.

Dear Upstart: Have you really thought this thing through? With just 30 acres, your cow-calf operation would be just that: one cow and one calf! That's all 30 acres can handle in these parts . . .—Montana Rancher.

One of the many false impressions people have about Northwest ranching is that land is dirt cheap. True, land values per acre are relatively low. But cheap land is no bonanza when you consider the vast holdings a man needs to earn a decent income from a cow-calf operation.

For several years now, ERS has

done studies of commercial cow-calf enterprises in the Northern Plains and the Northern Rocky Mountain Plateau. These are two of the Nation's most important cow-calf producing centers, taking in parts of Wyoming, Montana, South Dakota, and Idaho.

Figures on costs and returns show a surprisingly large proportion of a rancher's total investment is not in livestock but in land. Up to three-fourths of the capital is tied up in real estate, mostly grazing land.

In the Northern Plains, a profitable cow-calf unit has around 300 head of good quality Hereford or Angus brood cows. It takes around 18 sections of land, or 11,500 acres, to carry these animals.

Ranchers in the Northern Rocky Mountain area operate less land than the Plainsmen—around 6,000 acres—but carry about the same number of brood cows. Another difference is

that the colder climate in the Rocky Mountain area necessitates heavy winter feeding. Cattlemen there also make extensive use of public grazing land. This reduces investment in land, which for a 300-cow unit is about two-thirds that in the Northern Plains.

For the purposes of the ERS studies, a commercial cow-calf operation is one that runs a minimum of 200 brood cows.

Owning and operating a typical ranching spread requires around \$1,000–\$1,500 total investment per brood cow. All told, ranch investment amounts to about a half million dollars: \$350,000 in land; \$100,000 in costs to stock and maintain a good breeding herd; and \$25,000 in machinery, equipment, and supplies.

For every dollar they had invested in livestock in 1971, Rocky Mountain cattle ranchers invested an average of \$2.50 in land. The figure was even

higher in the Plains—\$3.50—since most ranchers own the land they graze cattle on.

Running a successful ranch the Northwest way takes much more than a large initial investment. Imagination, ingenuity, alertness, and management ability are essential in this game.

Thanks to good management of private and public range and good husbandry, ranchers have been able to soften the impact of steadily rising prices they pay for production inputs. Total costs of ranching climbed 30–40 percent in 1960–71.

In the Rocky Mountain area, wage rates soared 60 percent, machinery and related items by 50 percent, and property taxes, 65 percent. Net ranch production, however, went up a fourth during 1960–71. And in the last 5 years, output per unit of input averaged nearly a sixth above the early 1960's. Besides improved management, productivity increases came from better forage conditions, higher crop yields in recent years, and larger breeding herds.

Financially, 1971 was the best yet for Northwest ranchers. Returns to operator and family labor and management and capital averaged a record \$31,500 in the Northern Plains and \$31,800 in the Rocky Mountain area, also a new high. Of course, from this must be deducted interest paid on borrowed capital, leaving a net figure of \$23,900 in the Plains and \$24,800 in the Rocky Mountains.

Most of the income gain was due to strong cattle prices: for fall calves, they averaged \$38.50 per cwt. in the two study areas. Generally favorable range conditions also made a difference, allowing for growth in herd size, stepped-up calving rates, lower death rates, and higher calf market weights—10–15 percent more than in 1960–61.

Heavier market weights, incidentally, can have quite an effect on ranch incomes. With this in mind, ranchers in the Northern Plains in particular are doing more and more crossbreeding. In general, they re-

port very favorable results.

According to records kept by Western cattle ranchers, mid-April calves from Angus females bred to Charolais bulls weighed about 520 pounds at marketing in early November. This was nearly 100 pounds above the average for all calves in the area. A rancher selling 250 calves at the heavier weight would

Thrift Tour

How average is "average"?

Talking about prices farmers pay, there can be quite a spread between the average State prices and those paid in the Nation as a whole.

Suppose a Kansas man went shopping in his home State for these items of new farm machinery—

combine (medium capacity, 13½ ft. header)

tractor (70-79 hp)

farm wagon (less box and tires)

pick-up hay baler

disk harrow (8 ft. tandem)

And, to keep his new equipment in good running order, the farmer also bought 30 gallons of all-weather oil and 5 35-pound pails of grease.

All purchases were made June 15, 1971, except the disk harrow, which the farmer got on September 15.

His total bill—based on average prices paid in Kansas as listed in USDA's *Agricultural Prices*—would have come to \$23,902. Based on average U.S. prices, these same items would have cost \$24,820—or \$918 more.

The Kansas prices in many instances were lower than the U.S. prices. Even so, with one exception our Kansas farmer could have bought these articles more cheaply in other States.

The "best buy" on the combine would have been in Oklahoma and Michigan; tractor and disk harrow, in Oklahoma; wagon, Kentucky; pick-up hay baler, Wisconsin and South Dakota; the oil, North Dakota; and the grease, in the farmer's State of Kansas.

Total bill: \$21,060—or \$2,842 less than the tab based on average Kansas prices, and \$3,760 less than the total based on the average U.S. prices. (2)

get \$8,600 in extra gross profit (assumes a 4¢ discount per pound from the 1971 average market price of \$38.50 per cwt. for the heavier calf).

The extent of crossbreeding in the Northwest is not known. However, estimates made in feedlots and related areas place the proportion of first progeny from crossbred animals at almost 25 percent in the Northern Plains and 30–40 percent in the Rocky Mountain area. (1)

Farmers Kept \$731 Million Of Own Production in '71

A class from the city was touring a dairy farm near Maryland's Sugarloaf Mountain when someone asked the farmer where he got his table milk.

"The supermarket," came the reply, causing a good deal of surprise among the students.

They didn't know it, but few farmers today raise much of their own food. It's simply easier for them to buy it in this age of specialization.

That dairy farmer, for instance, never touches the milk he sells. It's pumped from cow to storage tank for pickup.

Last year, the Nation's 9.4 million farm people kept about \$731 million worth of their production for their own food use, valued at average prices farmers received in 1971.

That's only a third of the value they kept 20 years ago, when 21.9 farm people used \$2.3 billion worth of their own livestock and products, crops, and fuel wood.

Part of this decline is due to the decreasing farm population and part, to increasing specialization by farmers.

Most of the consumption is in livestock products. Farm households kept more than \$520 million worth last year. Cattle and calves made up nearly half this total, followed by dairy products, hogs, and eggs.

Crops accounted for a much smaller share, not quite 30 percent of the total value of products produced and consumed on the farm.

Most popular of all crops were strawberries. Statistically, farmers in 1971 harvested 1 out of every 7 strawberries for themselves. And in a year's time, this came to \$21 million worth.

Other popular crops on the farm were potatoes and sweet potatoes, of which farmers kept \$8 million worth; apples and pecans, at \$4 million each; and oranges and peaches, around \$2½ million each.

Across the Nation, North Carolina ranked No. 1 in terms of value of products consumed in farm households—\$49 million worth.

Wisconsin was next at \$42 million, with Minnesota, Kentucky, Iowa, and Missouri each around \$33 million. (5)

Farm Programs: Impact On Real Estate Values

Do farm commodity programs affect the value of farm real estate?

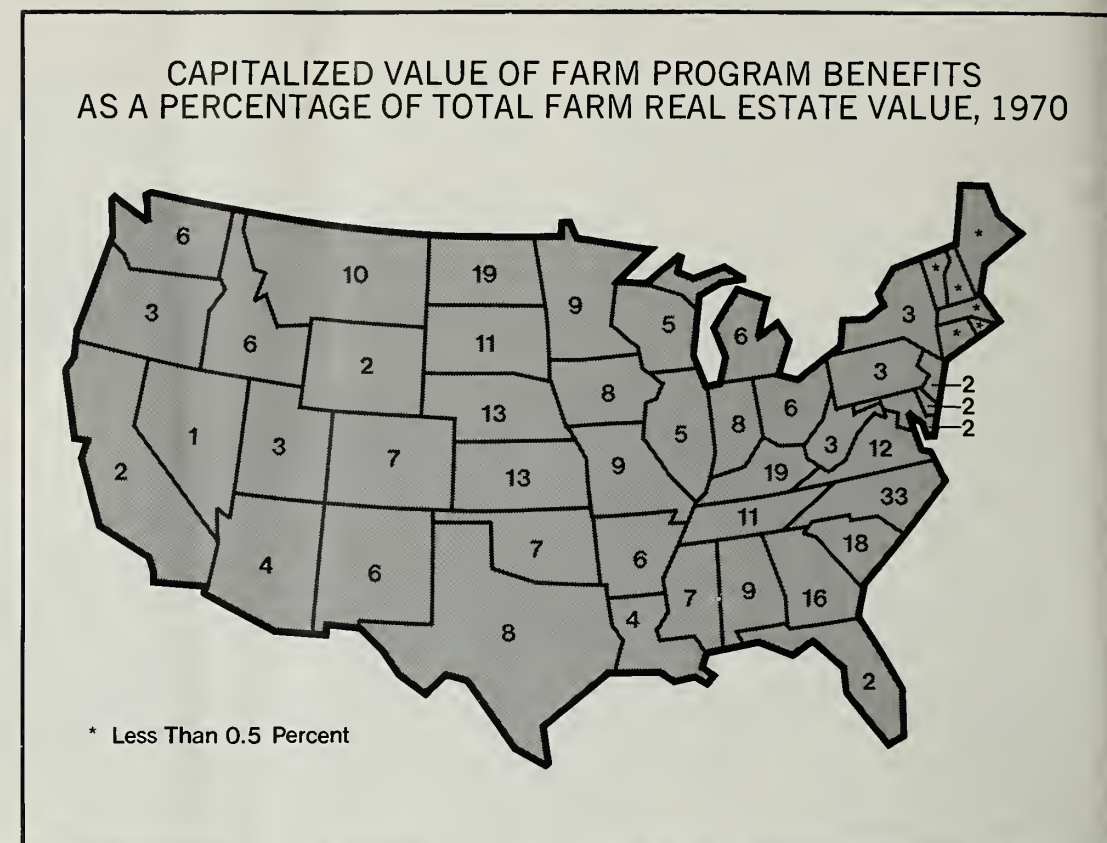
The consensus is they do. Potential producers of a commodity are willing to pay more for the land if it carries income from a farm program.

How much more they pay depends a good deal on the way they view the benefits to be expected from farm programs.

A recent ERS study on the subject concludes that land and allotment buyers attach some uncertainty to the expected stream of future program income. It appears they consider the possibilities that program provisions might be changed, or programs might be discontinued, or market prices might improve to the point where returns from programs would be very low.

The evidence suggests that interested buyers, unsure of the rate of return on investment, discount the possible benefits to come from the program in the future. That's especially true when alternative ways of making money look more attractive.

One measure of the degree of uncertainty is the discount rate implied by the ratio of rental value to sale value of allotments. The higher the ratio, the greater the risk. Data



from the ERS study show wide variation in the ratios, ranging from .21 for cotton to .12 for peanuts and rice.

Using market values that reflect these ratios, the researchers calculated the present value of future benefits from farm programs capitalized into land values. For the base year, 1970, the result was \$16.5 billion—or 8 percent of the value of farm real estate in 1970. This would have been the value capitalized into land if all farmers had purchased land and program rights at prices paid by actual buyers in 1970.

(Relatively few farmers actually bought land with farm program benefits or production rights in 1970. Of this land that did change hands, benefits were valued at \$415 million.)

The calculated capitalization rates, if actually used by producers in 1970, would have averaged around 15 percent. This is multiplied by the \$16.5 billion in total capitalized value to estimate the annual return to land from farm programs. The result is about \$2.5 billion—or slightly more than a third of the \$6.5 billion in total farm program benefits for 1970. The remainder of the short-term program earnings, i.e., those

not accruing to land, went to operators' labor and management and other production inputs.

Taking the 15-year period from 1955 to 1970, buyers paid a total of \$5.9 billion just for farm program benefits alone. Of this amount, it is estimated they had recovered all but \$2.7 billion by 1970. What this means, the study said, is that few farmers would sustain a real capital loss—due to decline in land values—if programs were removed.

In general, the impact of a reduction in programs would be severest in areas with the fewest alternatives to production of allotment commodities. It's in such areas that much of the benefits from the program get bid into land values.

In North Dakota, for example, nonfarm investment opportunities are relatively scarce. With few nonfarm options for using labor and capital, farm operators may tend to seek more land to employ excess labor and capital more fully. In the process, land prices are bid up, and more of the program benefits become capitalized into real estate.

In many areas, however, there are numerous and growing alternatives to the production of farm program

commodities. Farmers often find they can add more to their incomes by taking on part-time employment off the farm, instead of buying additional land with production rights. Too, they may find income from unsupported crops to be almost as high as from those under programs. (4)

U.S. Cotton Use Holding Its Own

Cotton producers are not rejoicing over what's been happening to their share of the textile market. However, the cotton industry is faring

reasonably well in terms of total use by U.S. mills.

Mill consumption in 1972-73 is expected to inch up a bit from last year's 8 million bales, marking the fifth year in a row of relatively stable cotton use. Manmade fibers, nevertheless, continue to capture most of the market growth for all textiles.

One of the promising indicators for cotton use is the low ratio of cotton cloth stocks to unfilled orders for cotton goods. Stocks are the smallest since 1953, and orders are the largest since late 1967.

Most of the strength in the cotton

market is coming from a lively demand for denim and corduroy. Production in the first 6 months of this year ran a fifth larger than in the 1971 period.

The outlook for cotton exports is also optimistic. They're estimated at around 3½ million bales in 1972/73, compared with 3¼ million last year. Exports should benefit from larger domestic supplies this season, bigger cotton use expected in Western Europe, higher shipments to Japan, and increased emphasis on special Government programs for exporting U.S. cotton. (3)

FARM INCOME STATISTICS:

Some of the most quoted—and misquoted—of all statistics are the U.S. Department of Agriculture's national farm income figures. USDA publishes regularly a comprehensive set of income estimates relating to agriculture. The major series, along with other important series from which they are derived, have been developed over more than a third of a century. Each series, whether major or minor, is designed for a specific purpose. For accurate results it should be used only in the way it was designed to be used. Unselective use is a common cause of error. Many figures may be vaguely reported as farm income—cash receipts, realized gross income, total net income, for example. Yet there are billions of dollars worth of difference between them. USDA's estimates center around two major concepts of farm income: One views agriculture as a business or an industry and measures income from the job of farming. The other views the people who live on farms and measures their income from both farm and nonfarm sources. The major series in each classification and their relationship to other series are shown here

INCOME FROM FARMING, 1971

Billion Dollars

CASH RECEIPTS FROM FARM MARKETING Money received from sales of about 150 farm products.	53.1
GOVERNMENT PAYMENTS TO FARMERS Payments to farmers under farm programs. Net price support loans are included with cash receipts above.	3.1
NONMONEY INCOME Includes home consumption of farm products and imputed rental value of farm dwellings.	3.9
REALIZED GROSS INCOME FROM FARMING Income from farming available for all purposes—farm operation, family living and investment.	60.1
PRODUCTION EXPENSES All cash spent to operate the farm business, plus certain non-cash items. Includes depreciation of equipment and other capital items rather than current purchases of these items.	44.0
REALIZED NET INCOME USDA's standard net income figure. The word "realized" indicates that the figure has not been adjusted for changes in inventories. Represents return to operator for his labor and management, the labor of his family and his invested capital.	16.1
NET CHANGE IN INVENTORIES Difference this year from last in quantities of each crop and livestock product held on farms, valued at average prices received by farmers during the year just ended.	1.3
TOTAL NET INCOME This figure is a component of national income figures of the Department of Commerce. It is published in the national income reports of that Department as "net income of farm proprietors."	17.4

PERSONAL INCOME OF FARM POPULATION, 1971

Billion Dollars

PERSONAL INCOME FROM FARM SOURCES:	
TOTAL NET INCOME FROM FARMING OF FARM RESIDENT OPERATORS This is the total net income of farm operators from farming minus the net income received by farm operators who do not live on farms.	14.6
FARM WAGES OF LABORERS LIVING ON FARMS Wages and other labor income for farmwork paid by farm operators out of their gross income to workers living on farms. These wages are a production expense to farm operators, but a source of income to the farm population.	1.2
CONTRIBUTIONS OF FARM RESIDENT OPERATORS AND WORKERS TO SOCIAL INSURANCE	0.4
TOTAL PERSONAL INCOME OF FARM POPULATION FROM FARM SOURCES	15.6
PERSONAL INCOME FROM NONFARM SOURCES: Includes wages, salaries, and other labor income of farm residents from nonfarm jobs, rents and royalties, dividends, and interest, net income from nonfarm business and professions, and transfer payments, such as unemployment compensation and social security.	13.9
TOTAL PERSONAL INCOME OF FARM POPULATION FROM ALL SOURCES	29.5



Men and Milestones

WASHINGTON, Nov. 24, 1874—Joseph F. Glidden is granted patent no. 157,124 for an improved type of barbed wire.

Barbed wire. It enabled men to fence the Plains and helped turn the region into a place of arable farming and superior livestock breeds.

The story of barbed wire is almost as tangled as the wire itself. But Glidden's role is clear, for he was the one who discovered how to make a reliable, commercial version of the product.

The important feature of his patent was the novel way of holding the barbs in place. He twisted spurs around a strand of smooth wire, then locked them in position with a second strand wrapped around the first.

The operation could be performed by machine, and after some initial skepticism, distributors in the West began ordering barbed wire by the carload.

The man who made it all possible was born on January 18, 1813, in Charlestown, New Hampshire.

Moving west in 1842 as an itinerant thresher, he settled on a farm in De Kalb County, Illinois, 2 years later.

He got the idea for his invention at the De Kalb County Fair in 1873 where he saw an early type of barbed wire and decided that it could be improved.

Glidden sold half interest in his invention to a neighbor in 1875. A year later he sold the remaining half interest to a Massachusetts firm for \$60,000 plus a royalty for the life of the patent.

Although Glidden himself made and marketed barbed wire only for a short while, he had amassed a fortune by 1891 when the patent expired.

At one time he dabbled in local politics, and his business ventures included farms and ranches in Illinois and Texas, a bank, a grist mill and the Glidden Hotel of which he was builder and owner.

But when Joseph Glidden died on October 9, 1906, he owed his reputation to the fencing material that helped tame the West. (8)

Corn Belt's Lead Slips In Soybean Production

Though research led to greatly improved soybean varieties in the late 1920's, it wasn't till after 1950 that the crop really caught on with U.S. farmers. Area planted to soybeans since 1950 has about tripled.

This year, farmers planted 46 million acres to soybeans, setting a record for the 13th straight year. That's the equivalent of nearly 1 in 7 acres of all the cropland planted for harvest in the U.S. Production, estimated at 1.3 billion bushels, is a new record.

Today as in 1950 the heart of the soybean industry is the Corn Belt. But through the years, the Corn Belt's share of total soybean acreage and production has gone down. In 1950 this region had 68 percent of all soybean acreage and in 1971, 51 percent. The Corn Belt's production share in the same period dropped from 76 percent to 60 percent.

The Delta States took up much of the slack. Their share of total acreage rose from 8 percent in 1950 to 20 percent in 1971, and production, from 7 percent to 16.

Also in the past 22 years the average soybean yield for all regions climbed from 22 bushels per acre to 28 in 1971, although Corn Belt farmers averaged 31 bushels.

Nationwide, production increased from 299 million bushels in 1950 to 1.2 billion last year. And, soybeans' farm value jumped from \$738 million to \$3.5 billion. Soybeans are now the Nation's second most valuable cash crop, exceeded only by corn.

Despite its steep uptrend, annual soybean production has barely kept up with annual utilization, and in recent years it has fallen behind. During 1950-69, utilization grew at an average annual rate of 8.8 percent. Much of the higher use reflects a boom in soybean exports; they increased at an average rate of more than 22 percent a year in the 1950-69 period. Exports of soybean meal, however, increased even faster—by 46 percent a year. (9)

Under pressures of rising expenditures and resistance to higher property taxes, local governments have been looking to tax options—three of which are examined here.

Local governments have traveled several routes to ease the tax bite on private property, including local income taxes, payroll taxes, and sales taxes.

Whether these options would work in many rural areas remains to be seen. So far the development of new tax sources has been largely an urban phenomenon.

According to ERS specialists in community facilities, local governments in nine States now levy income taxes, though they're most widely used in five States—Kentucky, Maryland, Michigan, Ohio, and Pennsylvania. Most are city governments, chiefly because local income taxes provide one of the few alternatives for cities to get necessary revenue within their present tax structure.

Moreover, many of the cities levying the tax are employment centers. They stand to gain much from taxing commuters. Since commuters do use city services, this helps justify the tax on them.

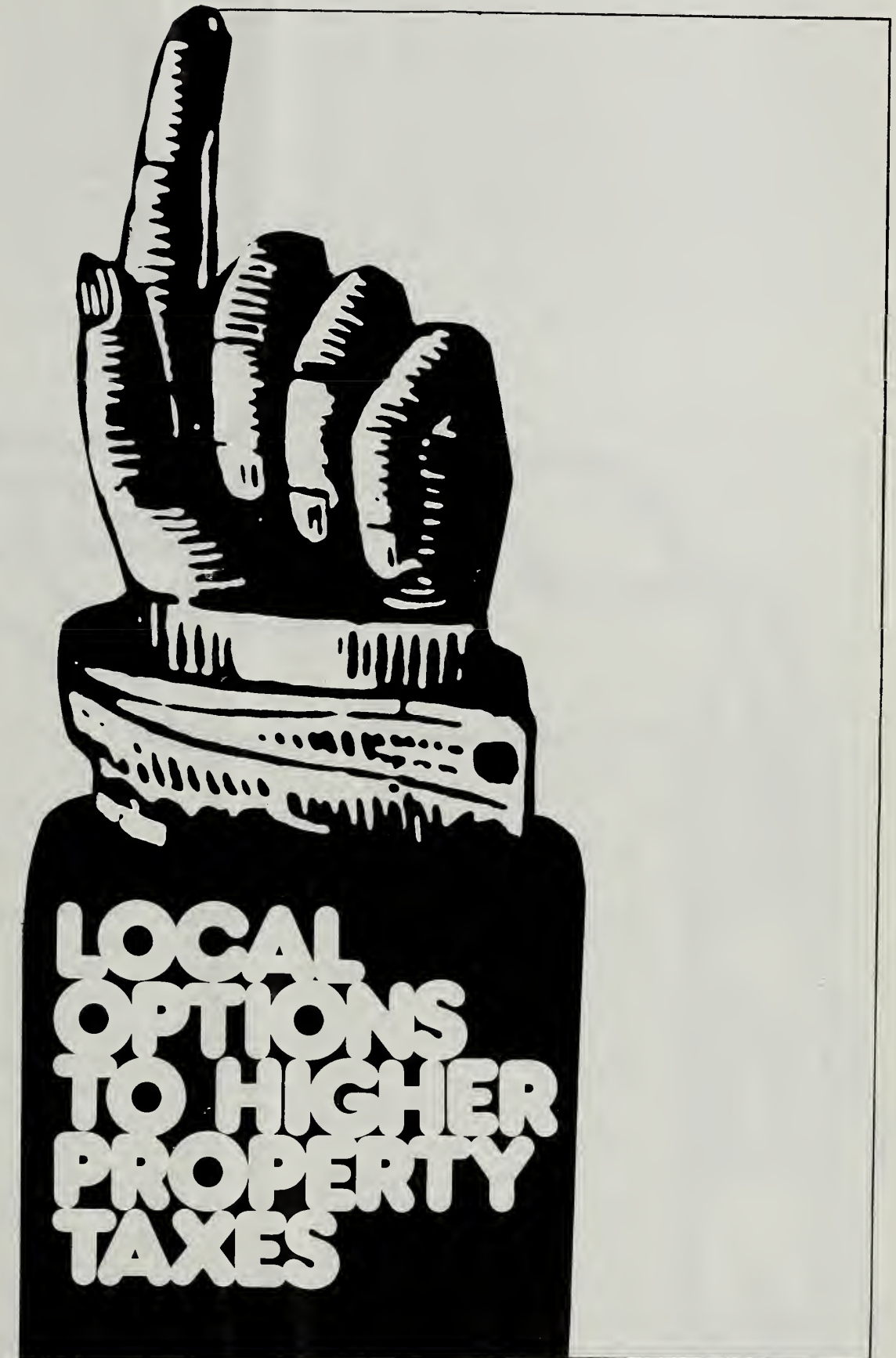
Local income taxes have their disadvantages, however. Taxpayers who already pay Federal and State taxes oppose a third layer of income taxation with its problems of complying with overlapping—but different—tax laws.

Commuters object to the tax when they have no voice in how the money is spent.

The tax can discourage new business and residents from moving into an area.

Other shortcomings: local income taxes can be costly to collect alongside revenues generated; the revenue flow is more uneven than from property taxes, especially in the case of smaller local governments. State governments, rather than collect a hodgepodge of local income taxes, tend to favor increasing taxes at the State level and to share some of the revenue with local units.

Payroll taxes offer the same pluses



and minuses as the local income tax. They have the additional disadvantage of being less equitable than a general tax, since a smaller portion of all income is taxed.

In rural areas in particular, the payroll tax would not appear to be a solution to the basic question of

property tax reform. That's partly because wages and salaries in rural places account for a smaller share of total personal income than is true of the country as a whole.

Local sales taxes, a third type of nonproperty tax which is levied in 25 States, carry substantial benefits

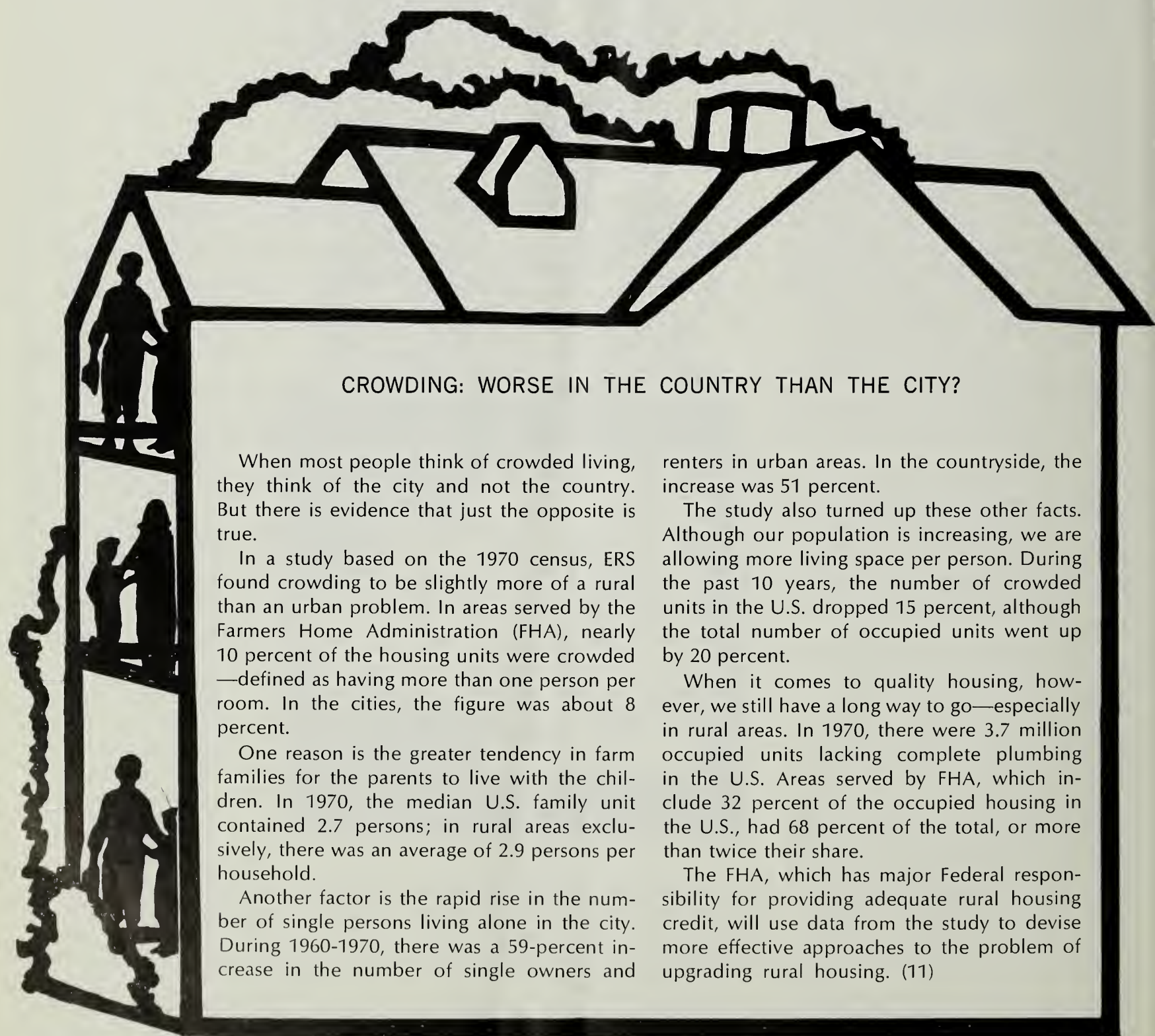
for shopping center communities. The revenue base is more stable than the local income tax, but less stable than the property tax. Too, smaller communities prefer the local sales tax to the income tax because sales taxes are easier to collect and there are fewer jurisdictional problems. And sales taxes are thought by some to be more equitable than property taxes.

On the other hand, the sales tax

can prompt small businesses to move out of the area so as to become competitive with retailers in the nontax localities. Also, because nonresidents are taxed, some inequities are created. Often the tax on nonresidents produces revenues which bear little relationship to the comparative revenue needs of the taxing and nontaxing communities.

In the view of the ERS economists who made these judgements, local

nonproperty taxes have one drawback in common. They depend on a local tax base, usually income or sales. These bases—especially in rural areas—may be more unequally distributed than the property tax base. As a result, the most sparsely populated rural units of government—which often face the most severe revenue problems—may find that nonproperty taxes would worsen their situation. (10)



CROWDING: WORSE IN THE COUNTRY THAN THE CITY?

When most people think of crowded living, they think of the city and not the country. But there is evidence that just the opposite is true.

In a study based on the 1970 census, ERS found crowding to be slightly more of a rural than an urban problem. In areas served by the Farmers Home Administration (FHA), nearly 10 percent of the housing units were crowded—defined as having more than one person per room. In the cities, the figure was about 8 percent.

One reason is the greater tendency in farm families for the parents to live with the children. In 1970, the median U.S. family unit contained 2.7 persons; in rural areas exclusively, there was an average of 2.9 persons per household.

Another factor is the rapid rise in the number of single persons living alone in the city. During 1960-1970, there was a 59-percent increase in the number of single owners and

renters in urban areas. In the countryside, the increase was 51 percent.

The study also turned up these other facts. Although our population is increasing, we are allowing more living space per person. During the past 10 years, the number of crowded units in the U.S. dropped 15 percent, although the total number of occupied units went up by 20 percent.

When it comes to quality housing, however, we still have a long way to go—especially in rural areas. In 1970, there were 3.7 million occupied units lacking complete plumbing in the U.S. Areas served by FHA, which include 32 percent of the occupied housing in the U.S., had 68 percent of the total, or more than twice their share.

The FHA, which has major Federal responsibility for providing adequate rural housing credit, will use data from the study to devise more effective approaches to the problem of upgrading rural housing. (11)

Garbage Feeding to Hogs Tightly Regulated

A generation ago, many communities in or near rural areas solved their garbage problem by contracting with hog producers to haul away the garbage to their farms for feed.

Today, that picture's greatly changed. During the past decade, food grinders, sanitary landfills, and incinerators have rapidly replaced such feeding.

Fifteen years ago, some 1.3 million hogs were fed garbage, compared with about 550,000 in March of this year.

And this "recycling" of garbage, where it's permitted, is tightly regulated.

It's a universal requirement in all States now that commercial garbage be cooked at the boiling point for at least 30 minutes prior to feeding.

All places feeding commercial garbage must be inspected at least once a month by a State veterinarian or one employed in the State by USDA's Animal and Plant Health Inspection Service. Accurate records must be kept by the hog feeders regarding equipment, procedures for treating the garbage, temperature at which it was cooked, from whom the waste products were received, from whom the hogs were purchased, and to whom they were sold. Licenses or permits may be revoked by the veterinarian for unsanitary conditions on the premises or for inaccurate records.

The reason for these regulations is that some years ago, uncontrolled garbage feeding created health hazards and was a source of hog cholera and other communicable and infectious diseases among livestock.

Now, all States have adopted statutes or regulations restricting or stringently governing feeding operations. In fact, eight States recently prohibited all garbage feeding, except for one's domestic household garbage fed to his own livestock. Three more States are phasing out commercial garbage feeding, and a fourth permits feeding but no longer issues new permits or licenses.

Most of the 7,000 garbage feeding establishments are located in the eastern and southern States. Most are small scale operators relying on restaurants, hotels, motels, and schools for waste foods. (12)

Farmland 'Dropouts' Are Likely Homesites

The lawn mower is cutting a big swath through farmland going out of agricultural use.

That's the indication from a sample survey by ERS in March that shows nearly 60 percent of farmland sold for nonagricultural use was for development into housing subdivisions and rural residences. Subdivisions accounted for nearly 40 percent of the total.

Another 15 percent of the acreage in the survey was sold for commercial or industrial use, and 14 percent was for recreational use.

The study was based on a sampling of farmland sales by USDA crop reporters. In March, they sent in information on the five most recent sales in their area during the previous 6 months that involved primarily a shifting of land out of agricultural use.

Three thousand transfers were reported, covering 663,000 acres, and valued at \$235 million.

Although detailed information is not available on the type of farmland going out of agricultural use, the selling prices and the predominant intended uses suggest most of the land had been used for grazing or was other than top quality farmland.

Of the 3,000 transfers, 40 percent were for rural residences, 24 percent for subdivisions, and 13 percent both for recreational use and commercial or industrial use.

In terms of land value, subdivisions accounted for nearly 40 percent of the \$235 million total. Commercial or industrial use accounted for 23 percent, rural residences for 18 percent, and recreational use, 11 percent.

Although, nationally, subdivisions

took up the most acreage going out of agriculture, they were No. 1 only in the Northeast, Southern Plains, and Mountain regions.

Forest use claimed the greatest number of acres in the Appalachian, Southeast, and Delta States region.

Recreation was the largest single intended use for land previously in agriculture in the Lake States and Corn Belt regions, while rural residences took up the largest acreage in the Northern Plains and Pacific regions. (13)

Rural Areas Get Set For Recreation Land Demands

It's getting harder and harder to find someone who "hasn't taken a vacation in years," or who doesn't get away for the weekend now and then.

Our increasing population, income, and leisure time all spell out a tremendous growth in demand for recreational land. One estimate is that by the year 2000 we will need 70 million recreational acres within a 1- or 2-hour drive from the user. That's eight times the 9 million acres available in 1956, the year of the latest survey.

And some 60 million acres will be needed for more distant, resource-based recreation such as national forests, parks, and wildlife refuges, a third more acreage than in 1956.

Rural residents can play key roles in this increased market for recreational land.

For instance, a growing number of farmers are opening their property to recreational uses. There are nearly 2 million farm ponds now, with another 50,000 being built each year. In the past 10 years, these ponds have provided 27 million recreation user days.

In addition, there's a heavy demand for second homes. Some 2-3 million Americans own second homes, and the number is increasing by 100,000 a year. It's estimated that in 1980, 180,000 urban families with both the resources and the inclination will be looking for second homes in the country. (14)



By streamlining operations and trimming output to three basic products, Michigan's fertilizer industry could eventually pare annual costs as much as a third.

An industry that finds it can produce far more than it can sell probably needs to make some adjustments. This situation faces the U.S. fertilizer industry. In 1970, manufacturing capacity outstripped sales by some 40 percent.

A joint study by ERS and Michigan State University developed and analyzed short- and long-term industry organizations which could meet farmers' fertilizer needs at the lowest cost.

With short-term adjustments, Michigan fertilizer firms could supply required levels of the three basic fertilizer nutrients—nitrogen, phosphate, and potash—and cut costs by a fourth. With a long-run reorganization requiring about 8 years to complete, costs could be trimmed as much as a third.

Though confined to Michigan and its primary supply areas, findings of the study may well apply to most of the Midwest, Northern Great Plains, Great Lakes States, and the northeastern seaboard.

The study's short-term least cost organization calls for production and

use of fewer, but more efficient fertilizer products. The shift can be achieved fairly easily, as many of the industry's facilities are currently underutilized.

In the short run, anhydrous ammonia—a primary nitrogen source—would be the only straight fertilizer product to be applied directly on farms.

Other products regularly used by Michigan farmers, such as nitrogen solutions, urea, ammonium nitrate, and superphosphates would no longer be applied directly. Some, however, would continue to be used in granulation and bulk blending.

Stepped-up use of granulated mix products and bulk blends would fill phosphate and potash requirements previously met by direct application of numerous fertilizer products.

The long-term organization that would fill Michigan's fertilizer needs at the lowest cost further refines fertilizer use to three basic products—anhydrous ammonia, monoammonium phosphate, and granular potassium chloride.

Again, the ammonia is applied directly. The other two products would be blended to the required ratio of phosphate and potash.

Researchers estimate the industry's long-run organization could meet required nutrient levels at a

cost of \$48 million—compared with \$71 million in 1970.

Supplying the three basic nutrients at the lowest cost involves major shifts in production regions and types of facilities.

The study found that it's cheaper to manufacture anhydrous ammonia in the market area and transport directly to farms, rather than to produce it in the Gulf Coast area and transport it to consumption centers through more traditional channels of distribution.

In the long run, this implies that the Gulf Coast's ammonia-producing facilities will decline in importance—contrary to recent trends.

Phosphate, the study concluded, could be supplied more cheaply by producing monoammonium phosphate near the rock phosphate mines in Florida. This involves a shift of basic phosphate production away from consumption areas—a trend that's already begun.

Granular grade potassium chloride was named the most efficient potash source in the long-term organization. As a result, the potash industry is expected to give priority to adjusting its refining process to turn out larger quantities of the granular product.

As the fertilizer industry moves

REFINING THE FERTILIZER INDUSTRY

toward a least cost organization, the carriers of fertilizer products—railroads, trucks, barges, and pipelines—will also have to make substantial adjustments.

For example, expansion of the phosphate industry in Florida would require additional rail capacity to ship phosphate products to the consuming areas. A shift of ammonia production from the Gulf Coast to the market areas would require more trucks, as well as additional pipelines for transmission of natural gas.

Substantial changes are also in store for the local industry, particularly in the mixing sector. Nutrient costs can be minimized by mixing monoammonium phosphate and granular potassium chloride—the recommended phosphate and potash sources—in large bulk blenders with an annual capacity in excess of those that currently exist in Michigan.

Since only a few of Michigan's blenders can operate at the higher levels, more large-scale blenders are needed. Based on the number and age of the State's blend plants, phasing out and replacement of existing plants by the larger models will peak near the end of the 1970's.

Until the large-scale blending operations can supply potash and phosphate requirements, granulation

plants will continue to be a fairly good source of low cost nutrients. Granulators, however, will decline in importance, as granulations offer neither the efficiency of bulk blends nor the handling ease of liquids.

The handling advantages of liquid mixes may help them maintain markets over a short run. But liquid mixes are a high cost source of nutrients, and will encounter stiffening competition from lower cost blends.

Local retailers will also be affected. In the long-term least cost organization, fertilizer products would bypass retailers and move from production and blending facilities directly to farms. Retailers would need to alter their services to remain in business.

For example, certain retailers could use their facilities as satellite outlets for blending operations. Their function would be to break down large shipments from the blender into small loads for local farm delivery.

Ultimately, it's the farmer who holds the key to a more efficient fertilizer industry. His influence over industry development stems largely from keen price competition—a result of overinvestment in production and distribution facilities.

Unless farmers drastically change their buying patterns, however, they

stand to block industry progress toward improved economic performance. Among other adjustments, farmers will have to make purchase decisions based on cost per nutrient.

For example, a farmer wishing to purchase nitrogen fertilizer might face a choice between anhydrous ammonia and urea. At \$65 per ton, urea might seem the better alternative to ammonia that retails for \$95.

But the anhydrous ammonia contains 82 percent nitrogen; urea, 45 percent. Therefore, a ton of nitrogen in the form of anhydrous ammonia costs \$115.85 (\$95 divided by .82). In the form of urea, the cost is \$144.44. On this basis, the farmer could fill his nutrient needs more economically by buying the anhydrous ammonia.

Changing from current consumption patterns to either the short- or long-run least cost organization may involve substantial changes farmers will not be willing to make immediately. Numerous alternatives exist for farmers, but they all are more costly. Further research is underway to determine the cost associated with the alternatives farmers may be more willing to accept in the near future. (15)

Fast Facts on Marketing

Shopping around for some concise information about our food marketing system? A wealth of marketing facts has been compiled for quick reference in a new ERS leaflet, *Marketing America's Food*.

For example, did you know that . . . in 1971, marketing added over \$71 billion to the value of farm-produced foods . . . the number of grocery stores in the U.S. dropped from 260,000 in 1960 to 204,900 in 1971 . . . the volume of farm products entering the marketing system has risen over a fourth since 1957-59.

Marketing America's Food (ERS-446) is yours, free, for writing The Farm Index, OMS, Room 1459, U.S. Department of Agriculture, Washington, D.C. 20250. (16)

Study Taps Out Pluses Of Teletype Cattle Auction

Just about all the fed cattle marketed in the U.S. are sold through terminals or auctions, or direct from producer to packer.

Less widely used methods of selling include country commissions, telephone auctions, and packer consignment.

Then there's the teletype auction. It's not used at all in the U.S., but, in Canada, teletype selling is the way most hogs are marketed.

From an economic standpoint, marketing fed cattle via teletype would have a lot going for it. That's the conclusion drawn in a new study by ERS and the Nebraska Agricultural Experiment Station.

Researchers evaluated eight methods of marketing fed cattle, and found the teletype method "far superior" to the other seven.

The marketing cost of selling by teletype, using 1970 cost figures, came to \$3.38 per head. This is considerably less than any of the more common methods now being used.

Teletype selling is the only method capable of creating a single fed cattle market. It is the only selling method capable of providing all of the producers equal access to the market.

Teletype is also the only method that can provide all buyers with the same opportunity to bid on all offers for sale; and the only method that can keep all buyers and sellers informed of the current exchange price.

The study computed the estimated savings that would accrue to both the producers and the packers if fed cattle were sold by teletype auction.

Using the 1969 marketing year, the teletype auction method of selling fed cattle would have resulted in a combined producer and packer gain of about \$100 million in physical efficiency, a \$579 million gain in pricing accuracy, a \$116 million gain in producer bargaining position, and a long-run gain of \$766 million in feeding efficiency. (17)

BREAD PRICES AND THE FARMER

Believe it or not, when you pay for a loaf of bread, less goes to the farmer than 25 years ago.

The retail price has gone up steadily since the 1940's. Last year, a 1-pound loaf of bread sold for 24.8¢ on the average, nearly double the 1947-49 average of 13.5¢.

From that 24.8¢, the farmer got 3.5¢ for his farm-produced ingredients, mainly wheat. Flour millers took .6¢. Bakers and wholesalers took 13.6¢, and retailers, 5.4¢. The remaining 1.7¢ was taken up by such miscellaneous charges as transporting, handling, and storing ingredients.

The farmer's share of the consumer's expense for a loaf of bread hasn't gone up in a couple of decades. He received slightly more last year than the 3.2¢ he averaged during the 1960's. But the 3.5¢ he did receive was a tenth of a cent less than he received in 1947.

The flour miller's share, meanwhile, dropped a little during the 1960's.

Millers have improved their

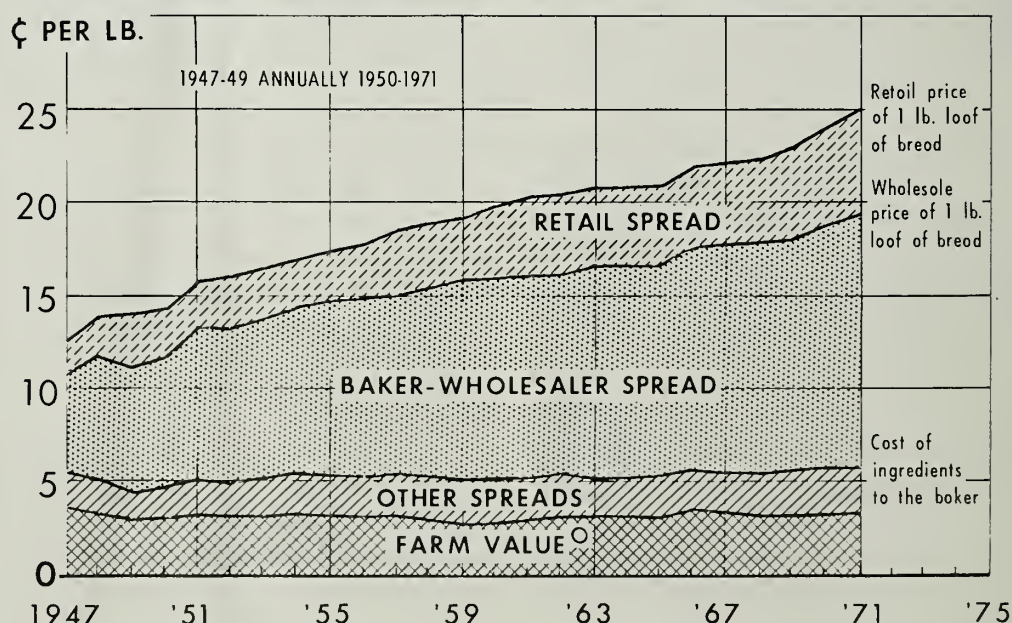
marketing efficiency by locating closer to markets. In a recent study, it was estimated that \$14 million might be saved in marketing costs if all flour mills were optimally located in relation to grain supplies and markets.

The baker-wholesaler's share is the largest, and has continually gone up. From 1970 to 1971, the increase was .6¢, equal to the .6¢ increase in the price of bread. Although the baking industry has managed to increase output slightly and has a declining number of employees, wage and salary increases have outpaced output per man-hour. Other costs have gone up too—including capital investments to keep up with technological advances.

The baking industry is challenged to find the means to increase efficiency. ERS, in cooperation with the University of California, has developed a computer model which could lead to reduced costs of bread distribution.

The final link in the marketing chain—the retailer—got .2¢ less in 1971 than in 1970. (18)

CONSUMER'S BREAD PRICE AND WHERE IT GOES



ALL INGREDIENTS INCLUDING MILLER'S MARKETING CERTIFICATE (SINCE JULY 1964).
COST OF INGREDIENTS IN 1970 AND 1971 WERE BASED ON NEW SERIES OF FLOUR PRICES DELIVERED TO BAKERY
AND DERIVED FROM A NATIONAL SURVEY OF 19 FLOUR MILLING FIRMS' SALES OF BREAD-TYPE FLOUR TO BAKERIES.

Peach Peeling Process Pares Down Pollutants

Scientists think they have solved the case of the polluting peach peel.

Up to now, leftover peels from commercial fruit canning operations have been a major pollutant in municipal sewage systems in some areas.

USDA scientists in California, headquarters of the peach canning industry, have developed a prototype peeling system that could also apply to such fruits as pears and apricots. It operates like this:

Peaches are pitted and halved, put face down on a conveyer, steamed and covered with a lye solution in preparation for peeling, just as is done now in commercial canneries.

Then comes the change: they're run through machinery that takes the skins off through abrasive action . . . the peels fall to a trough for disposal as solid wastes, possibly to be spread over agricultural land.

Current commercial practice is to remove the peels by water pressure. Peels and liquid then go out as wastewater into the municipal sewage system. Most plants offer only minimum treatment, which usually consists of passing liquid wastes through vibrating screens. But dissolved material, particularly sugar, makes for high biochemical oxygen demand (BOD) and suspended solids levels.

ERS, in some cost studies of this form of pollution control—called caustic dry peeling—found that the method would result in:

- Savings in a plant's water bill, because less fresh water is needed. The dry method uses 93 percent less water in peeling than the present wet method. In a simulated plant in California, ERS found the dry method saved—in fresh water charges—8¢ per ton of peaches peeled.

- Savings in wastewater service charges, due to reduced volume. The greatest saving would be where the meter system charged not only for volume, but also for pollution con-

tent. The dry method—by keeping peach peels out of the wastewater—results in 41 percent less BOD.

- Additional net capital costs. A unit capable of peeling 15 tons of raw peach halves an hour would cost about \$27,000. Amortized over 12 years, annual costs would run about \$6,030 for operating 60 days a year, or 33½¢ a ton. Annual cost for the current wet process is about 15¢ a ton, considering only maintenance costs. However, if wet peeling equipment replacement costs were considered, capital costs for both the dry and wet processes would run about the same.

- Increased solid waste disposal costs, due primarily to the doubling of solid wastes with the dry method.

- Savings from in-plant treatment of wastewater if BOD is a separate factor in computing sewer service charges. In-plant treatment is costly—\$21,340 yearly in the study's simulated model to remove about 34 percent of the BOD from wastewater.

But the dry method, by keeping the peels out of the wastewater, reduces BOD without any treatment.

Overall, the study found that the plant with a dry peeling system is more likely to experience a net savings if BOD is considered in sewage charges.

For instance, in a cost comparison for a simulated cannery, the dry method saved 17¢ per ton of raw cling peach halves peeled over the wet method when there was a complex wastewater service charge that included a BOD charge. That savings could climb to \$1.25 if in-plant treatment was added to the wet process to remove 34 percent of the BOD.

However, in an area where wastewater charges are figured on volume only, the dry method costs about 16¢ more for each ton of raw peach halves peeled. If costs were added to the wet method to reduce BOD by 34 percent, the dry method would save \$1.02 per ton. (19)

Who's Tending the Stove?

A growing share of the food produced on U.S. farms never sees the inside of a home kitchen.

ERS reports away-from-home eating ate up 30¢ of every dollar spent on farm foods last year—5¢ more than in 1963.

Total expenditures for U.S. farm foods in '71 came to \$111 billion. The away-from-home market—public eating places and institutions—claimed \$33.7 billion and the at-home market, \$77.4 billion.

Public eating establishments, distinct from institutions, are mainly operated for profit—restaurants, cafeterias, snack bars, vending machine outlets, etc. These places in '71 accounted for \$25 billion of expenditures for U.S. farm foods, or 74 percent of the away-from-home market.

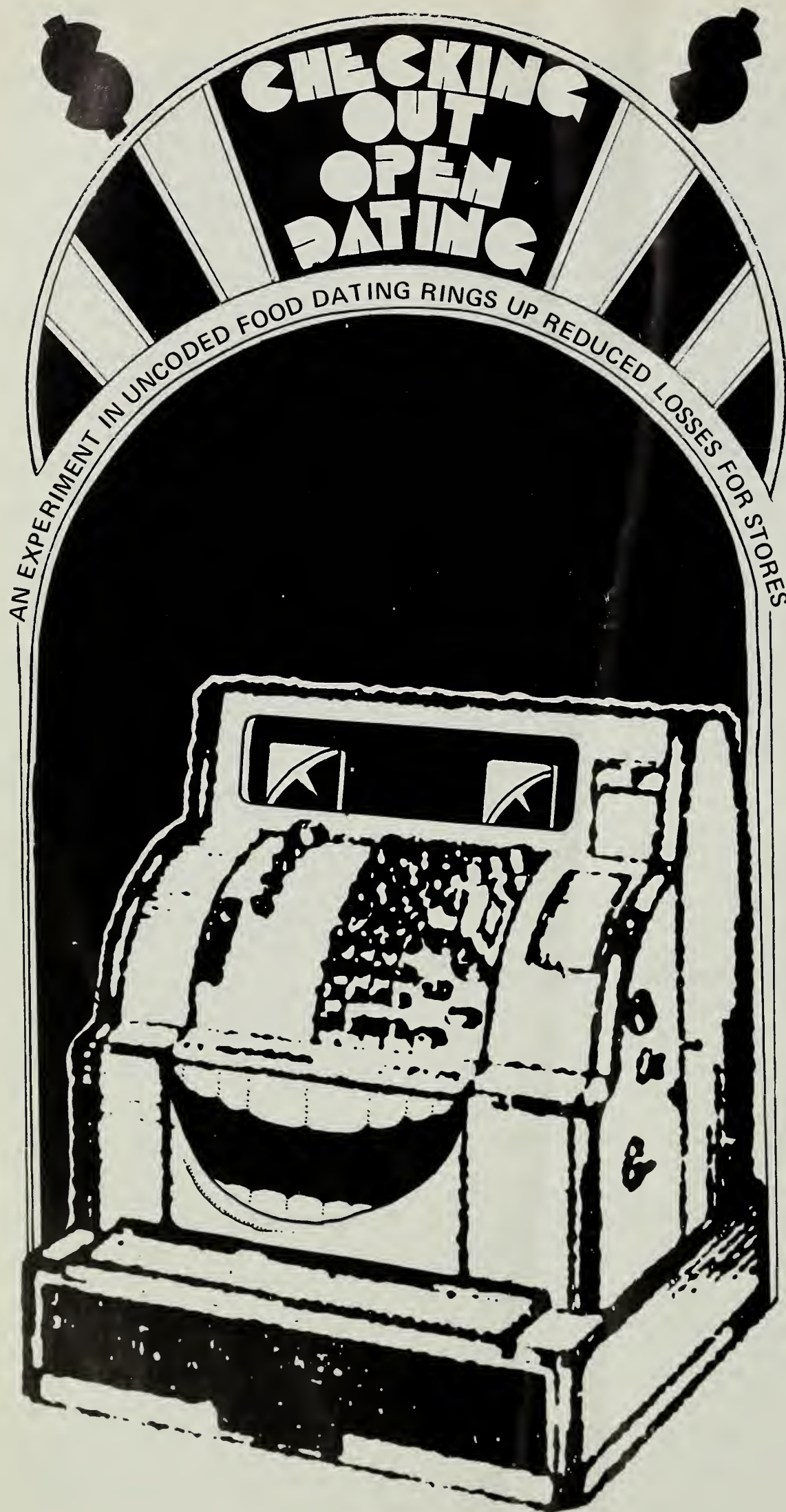
Institutions include schools, colleges, hospitals, rest homes and nursing homes, and airlines. They served food valued at \$8.7 billion in 1971.

Away-from-home eating has not only been carving a larger slice of total food expenditures, it's also been taking a bigger share of the farm value of these foods.

The at-home market in 1971 represented 80 percent of total U.S. farm value (\$35.8 billion); public eating places, 15.6 percent; and institutions, 4.4 percent.

However, the farm value of food consumed away from home increased 75 percent during 1963–71. The at-home farm value increased less than 50 percent in this period.

The marketing charge for U.S. farm foods consumed away-from-home was \$26.5 billion in 1971, or 35 percent of the total cost of marketing all farm foods (\$75.3 billion). The at-home marketing charge was \$48.8 billion, or 65 percent of the total. Marketing charges per unit of product are greater in the away-from-home market because of the additional services involved. (20)



No doubt there's been at least one supermarket manager who's had a nightmare about open dating.

It goes like this: all his customers dig through to the back of the shelf to find the latest dated products, while good food up front wastes away. His cash register tolls his losses.

Well, he can relax a little. In an experiment that introduced open dating to nine Ohio stores, ERS found that all stores had a substantial overall reduction in losses during the 8-week test period.

However, this was also true in two "control" stores where only better handling and stock rotation practices were emphasized.

Thus, closer attention to stock handling probably had more to do with loss reduction than open dating itself.

However, it was clear that customers weren't doing much sorting of food items to find the latest date. If they had been, the stores would have suffered high spoilage losses, which was not the case.

Shoppers benefited two ways in the experiment—they had date information available for their own use and they were more confident of getting high quality foods as a result of the improved handling practices by the store.

With the uncoded, less confusing dates as guidelines, clerks at the store did a better job of handling and rotating stock. Information gathered during the study also indicates clerks paid closer attention to expediting sale of products near the end of their shelf life so they didn't have to be discarded.

Nine stores in three Ohio cities took part in the experiment. Seven put uncoded dates on some 600 items—all in the food categories that consumers report most often as stale or spoiled: meat, bakery, dairy, and fresh produce.

In one city, four stores introduced "pull" dates—the date an item should be pulled from the shelf and removed from sale. Labels read "Sell by"

In a second city, three stores used "pack" dates—the date on which the item was packed.

In a third city, two "control" stores did not feature open dating, instead they emphasized better handling and stock rotating practices.

Now for the results.

Overall, product losses—as a percent of gross sales—went down. This was true in the 4-week pretest period when records were kept, and losses continued to go down during the 8 weeks when open dating was in effect.

Overall, too, package rehandling went down. About one-fourth fewer packages were rehandled during the test period than before. Packages are rehandled for a variety of reasons—such as to make price changes, to rewrap, or to discard.

The department that showed the most improvement was meat. For the stores as a whole, losses were cut in half, both in terms of dollar values and packages rehandled. Stores with pull dates had the most improvement in dollar loss, while those with pack dates reported the most improvement in package rehandling.

In the produce department, as might be expected, better handling methods paid big dividends. Fresh fruit and vegetable losses and rehandling were cut nearly in half in the two control stores. Stores with pack dates were next in terms of both dollar loss and rehandling of packages.

The dairy departments were unique in the study in that they were the only ones where the mere use of recordkeeping did not result in an immediate decline in dollar losses. Although losses and rehandling were generally quite low in this department, they did go up when the test began, but dropped below pretest levels by the end of the experiment for all but stores with pack dates.

In the bakery departments, dollar losses on rehandled packages went down about a third. The percent of packages displayed that required re-

handling dipped slightly from the pretest period, from 10 percent to 9. There was a 20-percent reduction in rehandling in stores with pack dates, and a 15-percent reduction in stores with pull dates.

In summing up costs of the experimental open dating program, chain store representatives set the total at \$21,000—\$12,000 for supervisory and administrative expenses and \$9,000 for labor, equipment, and supplies.

Most of these costs were due to the experimental nature of the open dating program: recordkeeping, extra labeling, and special supervision.

If open dates were standard procedure, costs would be much less. As one example, milk cartons would be open dated at the processing plant rather than at the retail store. (21)

Consumers Warm Up Fast To Frozen French Fries

Paced by frozen french fries, processed potato products are driving up U.S. potato consumption.

During 1960–70, domestic potato use swelled 10 pounds per person to 118.4 pounds (fresh equivalent basis). Processed items contributed all the increase.

Consumption of processed potatoes moved up from about 24 to 59 pounds per person during the sixties, whereas fresh use trended down—from about 85 to 60 pounds per capita.

Of all processed potato products, frozen french fries have earned the most rapid consumer acceptance. Back in 1960, each American ate less than 7 pounds. But by 1970, per capita use had shot up to 28 pounds. Estimates for this year indicate consumption will reach 31 pounds per person.

Other processed potato products made smaller—though substantial—increases over the past decade. Potato chip consumption gained around 6 pounds per person to 17.7 pounds. The share of processed potatoes going to chips, however, shrank from

50 percent to 30 percent.

Dehydrated potatoes continue to take about a fifth of all potatoes for processing, but per capita use since 1960 has more than doubled to 12.8 pounds. (22)

Poultry and Egg Prices Lowest at Chain Stores

When it comes to eggs and poultry, consumers normally pay less in chain stores than in stores that are independently owned. At least, that's what ERS found in a review of poultry and egg prices.

ERS analyzed prices from mid-1968 through 1971 in three types of stores in 14 cities: chain stores, large independent stores, and small independent stores.

As a rule, retail prices averaged lowest in chain stores, with small independent stores charging the most. There were, however, some important exceptions.

In New York City, for example, you generally paid less for Grade A large eggs (62.1¢ a dozen) in large independent stores than in grocery chains (62.8¢). If you live in Boston, Chicago, or St. Louis, you paid less for frying chicken in small independent stores than in chain stores. Generally, the price of eggs and turkeys was more closely related to store type than was the price of chickens. In all except three of the cities, medium-sized turkeys were least expensive in chain stores.

The biggest bargain cities for each of the products differed. Eggs were lowest, on the average, in San Francisco (48.8¢), and highest in Boston (67.3¢). The best buy on chicken was in Denver (32.1¢ a pound), which is somewhat surprising in view of the fact that several other cities were closer to the major broiler-producing areas of the South. Stores in Seattle charged the most (51.7¢). There was less variation in the price of turkeys, with New York topping the list at 56.8¢ a pound. Cleveland was next at 55.3¢. Minneapolis residents paid least for their turkeys, 48.1¢ a pound. (23)



\$10 BILLION IN FARM EXPORTS: REACHABLE BY 1980?

In the wake of the record \$8 billion in farm exports during fiscal '72, trade observers are speculating about the rate at which our exports will expand over the next several years. Some people predict we'll top \$10 billion before 1980.

ERS Administrator Quentin M. West explored this possibility in a paper presented at the annual meet-

ing of the American Agricultural Economics Association last August.

Basing his assessment on ERS trade projections, Dr. West said a \$10 billion export level by or even before 1980 is a reasonable goal. But he emphasized that certain conditions must be favorable.

Dr. West also hinted that even higher export levels might be

reached through negotiations to reduce the nontariff barriers to free world trade.

Tariffs, he pointed out, are no longer the major obstacles to free trade. Six rounds of the General Agreement on Tariffs and Trade (GATT) successively lowered customs duties.

In recent years, however, other trade and domestic policies have emerged as the main inhibitors to free world trade. These nontariff barriers include domestic support programs, export subsidies, domestic consumption restrictions, and preferential trade agreements.

Domestic support programs have been instituted in the U.S., Western Europe and Japan to raise farm income by supporting commodity prices. The programs have led to surplus production, which in turn has spurred greater use of trade policies and subsidies to protect these programs. The net result has been to discourage trade based upon economic comparative advantage.

Some countries use export subsidies to remove surpluses that develop when domestic prices are supported above their equilibrium levels. In some cases, the subsidies have been more costly than successful in expanding exports.

Restrictions on domestic consumption are a commonly used nontariff barrier in most European countries. In curbing consumer demand through high prices, these measures also restrain imports.

Preferential trade agreements among trading blocs pose a serious threat to free trade by granting easy access to each other's markets—thus discriminating against trade with other nations.

In projecting U.S. farm trade to 1980, ERS is placing increased emphasis on assessing the likely impact of changes in these national policies.

Three sets of trade conditions and their possible effects on U.S. farm exports are being examined: 1) export conditions that might result in zero growth, 2) those that would yield moderate growth, and 3) those

that would significantly accelerate farm exports.

In the zero growth situation, major countries achieve increased levels of self-sufficiency through such nontariff barriers as income and support programs.

Zero growth assumes that—

► The enlarged European Community (EC) becomes virtually self-sufficient in grain production;

► anticipated grain markets in the USSR and Eastern Europe fail to materialize, and the area becomes a net exporter of grains;

► livestock economies in the developing countries experience little growth;

► the "green revolution" in developing nations accelerates; and

► our P.L. 480 commitments hold at relatively low levels.

If all these assumptions were valid, U.S. farm exports would expand little, if any, above the current \$8 billion level. But even if nontariff barriers remain essentially unchanged, it's more reasonable to expect some export expansion.

Moderate growth would result from modification of some or all of the assumptions linked to the zero growth conditions. For example, the EC might remain a major grain importer. And the USSR might continue to import U.S. grains or possibly supplements to improve feeding efficiency.

Too, developing nations will probably make a concerted effort to build up their livestock industries. This would augur well for developed nations with grain surpluses, although exports to some developing countries would likely move under concessional programs.

Under these circumstances—even with no basic changes in nontariff barriers—U.S. farm exports could easily top \$9 billion. If all factors were favorable, the \$10 billion mark could be topped by or even before 1980.

The third set of conditions assumes negotiations succeed in lowering nontariff barriers. The result would be rapid expansion of world

trade as a totally new set of trade conditions emerges.

Exports of commodities in which the U.S. holds a competitive advantage would rise significantly. The gains, however, would be partially offset by higher imports of products in which the U.S. lacks a competitive edge. Moreover, exports of some commodities would fall.

For example, ERS's preliminary analysis shows exports of feed grains and soybeans would rise substantially—possibly by as much as \$4 billion. Two main factors would contribute to the increases: accelerated demand for meat and livestock products resulting from lower prices in developed importing countries; and a drawdown in Western Europe's grain output from levels that would have existed under current high grain prices.

But opening export markets for feed grains might only be possible if we open our import markets for beef and dairy products. This could lift imports by roughly \$1 billion (mostly dairy products), thus trim-

ming the net gain in export earnings.

Negotiations might also result in similar nontariff removals that would tend to encourage higher U.S. imports of certain commodities, particularly fruits and vegetables. (24)

Brazil Still No. 3 In Soybeans, But Gaining

Long overshadowed by both the U.S. and the People's Republic of China in soybean production, third-ranking Brazil stands out in terms of rate of increase—this year's production is forecast 12 times the 1960-64 average.

Estimates for this year's harvest are in the range of 3.2 to 3.6 million metric tons, well over 1971's record 2.1 million metric tons. Area planted in soybeans is about 7.5 million acres, up 63 percent from last year.

Two factors have aided Brazil's accelerated soybean production—(1) The economic benefits farmers reap from rotation of soybeans and wheat, a crop that is highly subsidized. Besides providing two cash crops a year, rotation spreads out the costs of combines and fertilizer. And, (2) the greater profitability of growing soybeans than cotton, corn, and coffee.

The forecast for 1972 Brazilian soybean exports is 700,000 metric tons, more than triple that of 1971. Soybean exports dropped that year because domestic prices were 15 percent above export prices.

Brazil's 1971 exports in meal, however, increased 66 percent over the previous year to 812,000 metric tons. A big increase in soybean meal exports this year could be competitive with U.S. exports to the Common Market. The European Community is Brazil's primary soybean export market and took 75 percent of its soybean meal exports in 1970. Other important markets were Eastern Europe, Spain, and Portugal.

Under Brazil's corridors of export program, the mid-term (1975) goal for unprocessed soybean exports is set at 3 million tons. (27)

Exports by the Acre

Though U.S. farm exports reached an alltime high in fiscal '72, they were produced on fewer acres than a year earlier.

The more than \$8 billion in farm commodities shipped overseas last year required the output of 1 in every 5 acres harvested, or some 65 million acres. The dropoff from the 72 million acres needed in 1970/71 resulted partly from a substantial increase in crop yields during 1971.

Exports accounted for half the total soybean and rice production, and two-fifths of U.S. cattle hides, wheat, and tallow. One-third of tobacco and cotton output went to foreign outlets. Feed grain exports amounted to about one-fourth of the sales by U.S. farmers.

Overseas markets also took a substantial share of several minor products, including a fourth of all dried edible beans, lemons, and nonfat dry milk. (25)

Food Distribution Poses Hurdle for Bangladesh

Hunger and malnutrition are no strangers to the new nation of Bangladesh, but they gained a stronger toehold in the wake of hostilities during 1971.

Per capita food production in Bangladesh (formerly East Pakistan) last year fell 16 percent below the 1961-65 average. The drop in paddy rice output, which dipped to just over 15 million metric tons from 18 million in 1969, accounted for most of the decline.

Bangladesh's food production reached its highest level in 1969. However, natural calamities, such as severe drought in 1966 and the typhoon of November 1970, have consistently disrupted the country's food supply and economy.

Until harvest of the aman rice crop begins in November, feeding its 75 million people remains Bangladesh's most pressing problem.

Imports provide the key to meeting food needs on a short-term basis. Bangladesh is expected to import

close to a million tons of rice, and 1.6 million tons of wheat during 1972.

To help finance imports and spur economic development, Bangladesh earlier this year received more than \$100 million in cash donations from the U.S. and several other nations.

Normal food supply channels—roads, bridges, railroads, and ports through which grain shipments usually pass—sustained heavy damage during the war. As a result, food distribution has been seriously impeded.

To speed up distribution and bypass the war-damaged port of Chittagong, the U.S. has anchored the tanker *Manhattan* offshore to serve as a floating grain silo.

The tanker receives grain from ocean-going vessels, and transfers it to smaller boats that carry the grain inland via rivers and canals. Some hard-to-reach areas have required emergency airlifts.

Domestic food production should pick up this year. Because of good monsoon rainfall and stepped-up use of high quality inputs, milled rice

output is expected well above 1970 and 1971 levels. Wheat production, though still small, is trending upward. Output of pulses—a major protein source—should also increase.

About half of the 9 million hectares of cropland is used for more than one crop annually. Production of potatoes and other vegetables rose sharply over the last decade because of increased multiple cropping.

Bangladesh received about 750,000 tons of wheat and rice from India on a grant basis this year. Due to poor monsoon rainfall in India during 1972, Indian grain deliveries to Bangladesh in 1973 will probably be much smaller. As a result, Bangladesh may seek larger supplies of wheat and rice from the U.S. and other sources.

Imports of wheat into Bangladesh might increase again in 1973, partly because of difficulties in importing rice from other Asian nations where exportable supplies have dwindled during the past year. (26)



Small boats are the most feasible means to transport much of the imported grain to consumers in Bangladesh. Most of the people live in the delta where the Ganges and Brahmaputra meet. Floods and constant changes in the location of river beds prevent the normal building of roads and bridges across large rivers. (FAO Photo)

Recent Publications

TREE NUTS BY STATES, 1970-71: PRODUCTION; USE; VALUE. Statistical Reporting Service, FRNT 4-1.

Presents estimates of production, price, value, and utilization for 1970 and 1971 crops of almonds, English or Persian walnuts, filberts, macadamia nuts, and pecans.

NATIONAL AND STATE LIVESTOCK FEED RELATIONSHIPS. George C. Allen, Earl F. Hodges, and Margaret Devers, Farm Production Economics Division. 1972 Supp. for Stat. Bull. 446.

Statistical indexes in this report measure relationships of livestock

numbers to feed and livestock production on a State and national basis. These relationships are detailed by kinds of livestock and livestock products, for feeding years 1961-70.

AGRICULTURAL FINANCE REVIEW. Edward I. Reinsel, Farm Production Economics Division, Volume 33, July 1972.

The eight by-line articles in this issue cover farm credit and capital flows, with projections; hedging and the agricultural lender; conglomerate growth; income gap of farm families; dollar's role in world trade; seller financing and land prices; nonfarm equity capital; and farm machinery leasing.

PRODUCTION OF MANUFACTURED DAIRY PRODUCTS 1971. Statistical Reporting Service. DA 2-1 (72).

This report compares the production of manufactured dairy products by specified categories for 1971 with 1970.

STRUCTURAL CHANGES IN WEST GERMAN AGRICULTURE. Elfriede A. Krause, Foreign Demand and Competition Division. ERS For. 339.

Structural changes in West German agriculture in the past 2 decades and the role of government programs in bringing about these changes are discussed. These changes relate to the agricultural labor force, farm size and farming structure, land tenure and consolidation, part-time farming, and marketing systems.

LOCATIONAL MODELS FOR COTTON GINNING AND WAREHOUSING FACILITIES. Charles A. Wilmot, Marketing Economics Division, and C. Curtis Cable, Jr., Cooperative Extension Service, University of Arizona. MRR 969.

The purpose of this study was to analyze costs associated with cotton ginning and warehousing for conventional plant arrangements of two theoretical models. The proposed

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models incorporate maximum known efficiencies in plant size, selection, and latest available technologies in processing and handling.

POTATOES AND SWEETPOTATOES: REVISED ESTIMATES—CROPS OF 1964-69, PRODUCTION, FARM DISPOSITION, VALUE. Statistical Reporting Service. Stat. Bull. 490.

This publication includes revised estimates by States and seasonal groups for acreage, yield per acre, production, farm disposition, utilization, season average price received by growers, and value of crops through 1969.

MAJOR STATISTICAL SERIES OF THE U.S. DEPARTMENT OF AGRICULTURE—HOW THEY ARE CONSTRUCTED AND USED. VOLUME 5. CONSUMPTION AND UTILIZATION OF AGRICULTURAL PRODUCTS. Agriculture Handbook No. 365.

Statistical data series which measure the supply and utilization of agricultural commodities are described and evaluated in this report. Some of the data relate to individual commodities and others are aggregate measures encompassing the entire complex of production and marketing activities.

SUPPLEMENT FOR 1971 TO FEED STATISTICS. Economic and Statisti-

cal Analysis Division, SB-410 Supp.

This supplement revises and updates tables to *Feed Statistics Through 1966* (SB-410) and serves as a statistical supplement to the *Feed Situation*, published five times a year by ERS and which carries current data for most series in this bulletin.

FARM MORTGAGE LENDING: EXPERIENCE OF 15 LIFE INSURANCE COMPANIES, FEDERAL LAND BANKS, AND FARMERS HOME ADMINISTRATION, JULY-DECEMBER 1971 AND CALENDAR YEAR 1971. Forest G. Warren and Nan P. Mitchem, Farm Production Economics Division. FML 28.

New farm mortgage money loaned during the last half of 1971 by the three reporting lender groups increased 51 percent over a year earlier. Mortgage loan commitments by life insurance companies and Farmers Home Administration during the last half of 1971 indicate that the increased level of new money loaned will be maintained in 1972.

SWEDEN'S PRIVATE-BRAND FOOD MARKET: DIMENSIONS AND PROSPECTS FOR U.S. EXPORTS. Norris T. Pritchard. The author, now deceased, was an Agricultural Economist in the Foreign Demand and Competition Division. FAER 82.

The study investigates Sweden's private-brand food market and the potential for increasing U.S. food exports to Sweden for distribution under private labels of Swedish food retailers and manufacturers.

PREPARING STATISTICAL TABLES. Statistical Reporting Service. Agriculture Handbook 433.

This handbook gives guidelines for table structure, discusses computation of tabular data, and briefly outlines responsibilities of the table-maker in transmitting draft tables for typing. Much of the material should be useful to editors and typists.

RURAL ZONING IN THE UNITED STATES: ANALYSIS OF ENABLING

LEGISLATION. Erling D. Solberg and Ralph R. Pfister, Natural Resource Economics Division. Miscellaneous Publication 1232.

This publication summarizes the main provisions of current enabling statutes that authorize zoning in rural or unincorporated areas in the U.S. Of major concern are zoning powers granted for protection of rural values—agriculture, soil and water, forests, fish and wildlife, recreational and scenic attractions, and related resources.

AGRICULTURAL TRADE OF THE PEOPLE'S REPUBLIC OF CHINA,

1935-69. Riley H. Kirby, Foreign Demand and Competition Division. FAER 83. The purpose of this study was to develop a statistical picture of trade in agricultural products by the People's Republic of China over the past 2 decades and to study trade prospects between China and the U.S.

COSTS AND RETURNS SOUTHWEST CATTLE RANCHES 1971. James D. Gray, Wylie D. Goodsell, and Macie J. Belfield, FPED. FCR-83.

This report is part of a nationwide study of costs and returns on 11 types of commercial farms and ranches in selected farming regions.

HOUSING 1970: DIFFERENCES BETWEEN SMSA'S AND NON-SMSA'S BY REGION WITH STATE DATA. Donald D. Steward and Paul Myers, EDD. AER No. 230.

Data presented in this report were compiled to show selected housing characteristics within and outside Standard Metropolitan Statistical Areas (SMSA's) for 1970. During the 10-year period covered by this report the number of SMSA's increased from 212 to 228; and numerous counties were also added to existing SMSA's.

Article Sources

Readers are invited to write for the complete reports, studies, speeches, or papers on which we base our articles. Authors and titles are listed below, preceded by numbers corresponding to those appearing at the end of stories in this issue. Those publications indicated by (*) are obtainable only from the university or experiment station cited. The word "manuscript" after an item denotes a forthcoming publication, which we will send you when it comes off press. "Special material" after an item means the article was researched specially for this magazine, although additional information is generally available. Address all inquiries to The Farm Index, Office of Management Services, U.S. Department of Agriculture, Room 1459, Washington, D.C. 20250.

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26. John B. Parker, Jr., and Reed E. Friend, FDGD. *Bangladesh's Agricultural Situation—A Brief Appraisal* (manuscript).
27. Samuel O. Ruff, FDGD (special material).

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Economic Trends

Item	Unit or Base Period	1971						1972
		1967	Year	July	May	June	July	
Prices:								
Prices received by farmers	1967=100	—	112	112	123	125	127	
Crops	1967=100	—	107	109	115	116	116	
Livestock and products	1967=100	—	116	114	129	131	136	
Prices paid, interest, taxes and wage rates	1967=100	—	120	120	125	126	127	
Family living items	1967=100	—	119	119	124	124	125	
Production items	1967=100	—	115	116	120	121	122	
Ratio ¹	1967=100	—	94	93	98	99	100	
Wholesale prices, all commodities	1967=100	—	113.9	114.6	118.2	118.8	119.7	
Industrial commodities	1967=100	—	114.0	114.5	117.6	117.9	118.1	
Farm products	1967=100	—	112.9	113.5	122.2	124.0	128.0	
Processed foods and feeds	1967=100	—	114.3	116.0	118.6	119.6	121.5	
Consumer price index, all items	1967=100	—	121.3	121.8	124.7	125.0	125.5	
Food	1967=100	—	118.4	119.8	122.3	123.0	124.2	
Farm Food Market Basket: ²								
Retail cost	Dollars	1,081	1,244	1,265	1,288	1,299	1,322	
Farm value	Dollars	419	477	486	513	528	544	
Farm-retail spread	Dollars	662	767	779	775	771	778	
Farmers' share of retail cost	Percent	39	38	38	40	41	41	
Farm Income: ³								
Volume of farm marketings	1967	100	111	105	81	91	90	
Cash receipts from farm marketings	Million dollars	42,693	53,063	4,122	3,750	3,968	4,400	
Crops	Million dollars	18,434	22,609	1,722	920	1,152	1,700	
Livestock and products	Million dollars	24,259	30,454	2,400	2,830	2,816	2,700	
Realized gross income ⁴	Billion dollars	49.0	60.1	—	—	64.8	—	
Farm production expenses ⁴	Billion dollars	34.8	44.0	—	—	46.5	—	
Realized net income ⁴	Billion dollars	14.2	16.1	—	—	18.3	—	
Agricultural Trade:								
Agricultural exports	Million dollars	—	7,695	579	712	743	682	
Agricultural imports	Million dollars	—	5,825	490	525	521	472	
Land Values:								
Average value per acre	Dollars	⁶ 168	201	—	—	—	⁷ 217	
Total value of farm real estate	Billion dollars	⁶ 181.8	213.0	—	—	—	⁷ 228.6	
Gross National Product: ⁴								
Consumption	Billion dollars	793.9	1,050.4	—	—	1,139.4	—	
Investment	Billion dollars	491.2	664.9	—	—	713.4	—	
Government expenditures	Billion dollars	116.6	152.0	—	—	177.0	—	
Net exports	Billion dollars	180.1	232.8	—	—	254.1	—	
	Billion dollars	5.2	.7	—	—	—5.2	—	
Income and Spending: ⁵								
Personal income, annual rate	Billion dollars	629.3	861.4	862.4	924.0	922.9	934.2	
Total retail sales, monthly rate	Million dollars	26,151	34,071	33,688	37,120	36,674	37,356	
Retail sales of food group, monthly rate	Million dollars	5,759	7,437	7,411	7,974	7,837	—	
Employment and Wages: ⁵								
Total civilian employment	Millions	74.4	79.1	79.0	⁸ 81.4	⁸ 81.7	⁸ 81.7	
Agricultural	Millions	3.8	3.4	3.4	⁸ 3.4	⁸ 3.3	⁸ 3.4	
Rate of unemployment	Percent	3.8	5.9	5.9	5.9	5.5	5.5	
Workweek in manufacturing	Hours	40.6	39.9	39.8	40.5	40.9	40.5	
Hourly earnings in manufacturing, unadjusted	Dollars	2.83	3.57	3.57	3.79	3.79	3.79	
Industrial Production: ⁵	1967 = 100	—	107	107	113	113	114	
Manufacturers' Shipments and Inventories: ⁵								
Total shipments, monthly rate	Million dollars	46,449	55,158	55,207	60,957	60,714	—	
Total inventories, book value end of month	Million dollars	84,606	101,665	101,315	102,822	103,519	—	
Total new orders, monthly rate	Million dollars	46,988	55,074	54,934	61,475	63,074	—	

¹ Ratio of index of prices received by farmers to index of prices paid, interest, taxes, and farm wage rates. ² Average annual quantities of farm food products purchased by urban wage-earner and clerical worker households (including those of single workers living alone) in 1959-61—estimated monthly. ³ Annual and quarterly data are on 50-State basis. ⁴ Annual rates seasonally adjusted second quarter. ⁵ Seasonally adjusted. ⁶ As of March 1, 1967. ⁷ As of March 1, 1972. ⁸ Beginning January 1972 data not strictly comparable with prior data

because of adjustment to 1970 Census data.

Sources: U.S. Dept. of Agriculture (Farm Income Situation, Marketing and Transportation Situation, Agricultural Prices, Foreign Agricultural Trade and Farm Real Estate Market Developments); U.S. Dept. of Commerce (Current Industrial Reports, Business News Reports, Monthly Retail Trade Report and Survey of Current Business); and U.S. Dept. of Labor (The Labor Force and Wholesale Price Index).

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